



ANTHRAX VACCINE IMMUNIZATION PROGRAM

UNCLASSIFIED



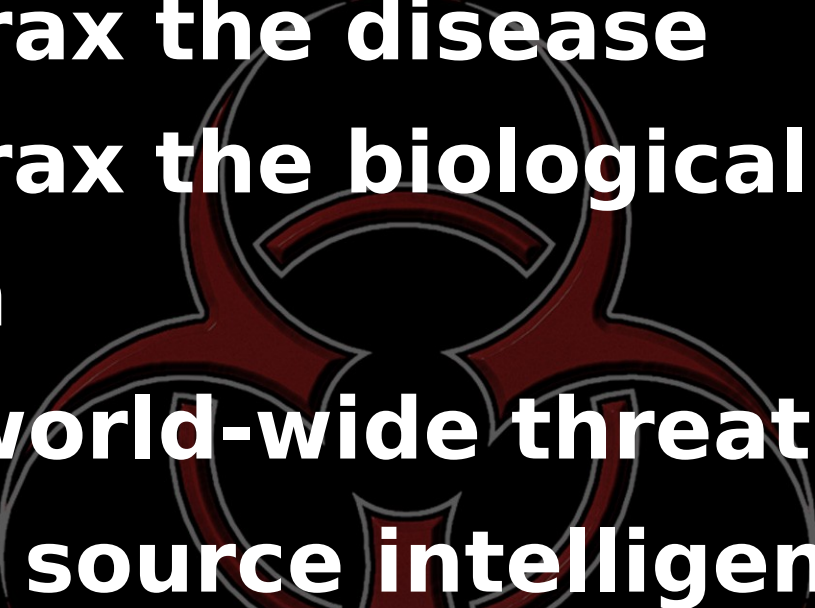
A Grave and Urgent Threat

UNCLASSIFIED

Purpose

- ◆ **The Threat is Real: Biological Warfare represents a grave and urgent threat to US Armed Forces**
- ◆ **Anthrax is as deadly as the Ebola Virus**
- ◆ **The US has a safe and effective FDA licensed vaccine to counter the threat**

Agenda

- ◆ **Anthrax the disease**
 - ◆ **Anthrax the biological weapon**
 - ◆ **The world-wide threat**
 - ◆ **Open source intelligence**
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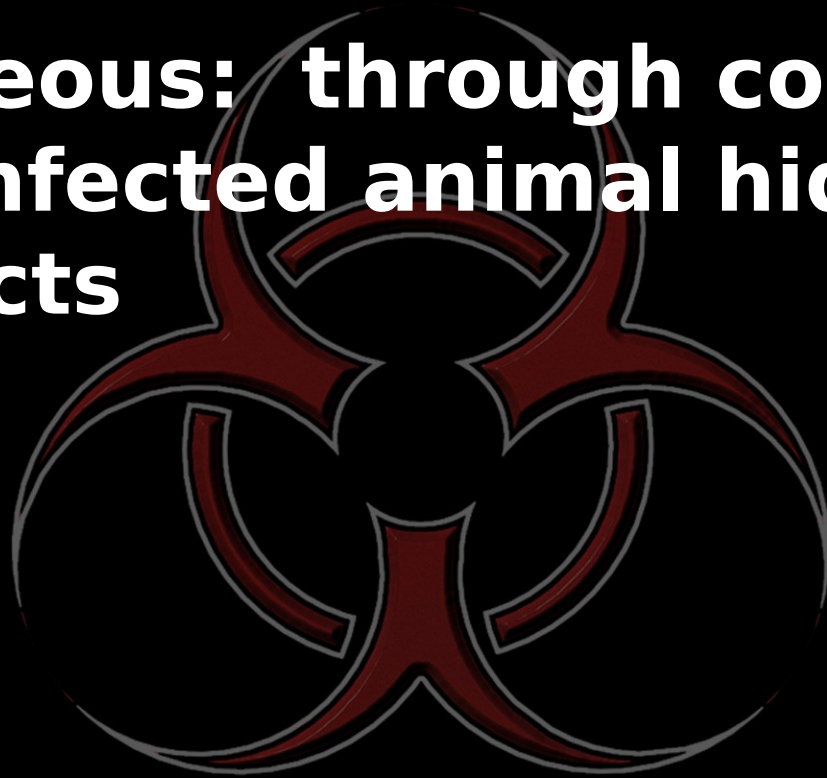
What is Anthrax?

- ◆ **A naturally occurring disease of sheep and cattle found worldwide**
- ◆ **Caused by the bacteria *Bacillus anthracis***
 - **A spore forming bacter**
 - **Hearty and stable**



Three modes of transmission

- ◆ **Cutaneous: through contact with infected animal hides or products**



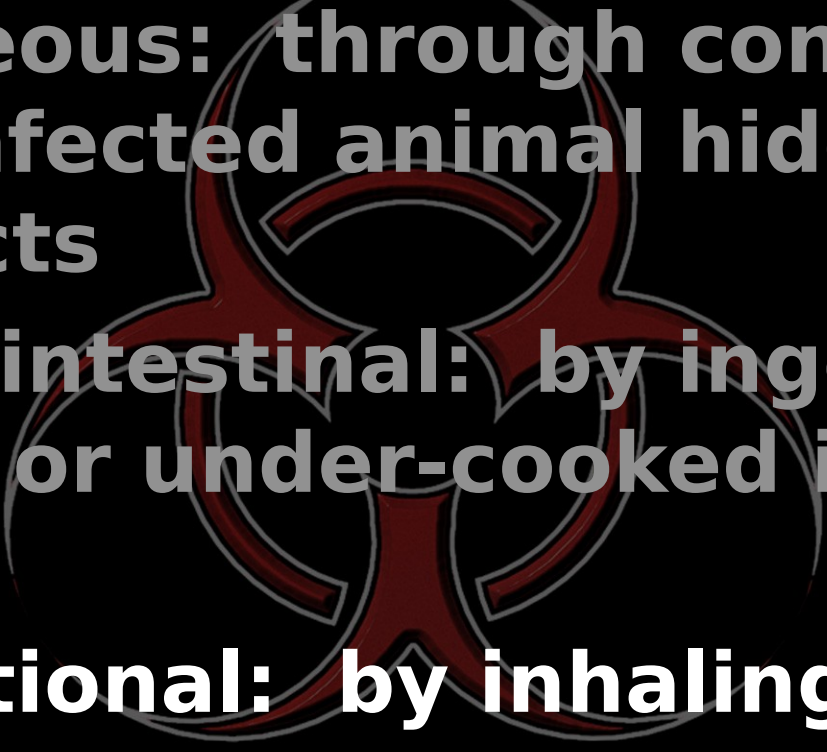


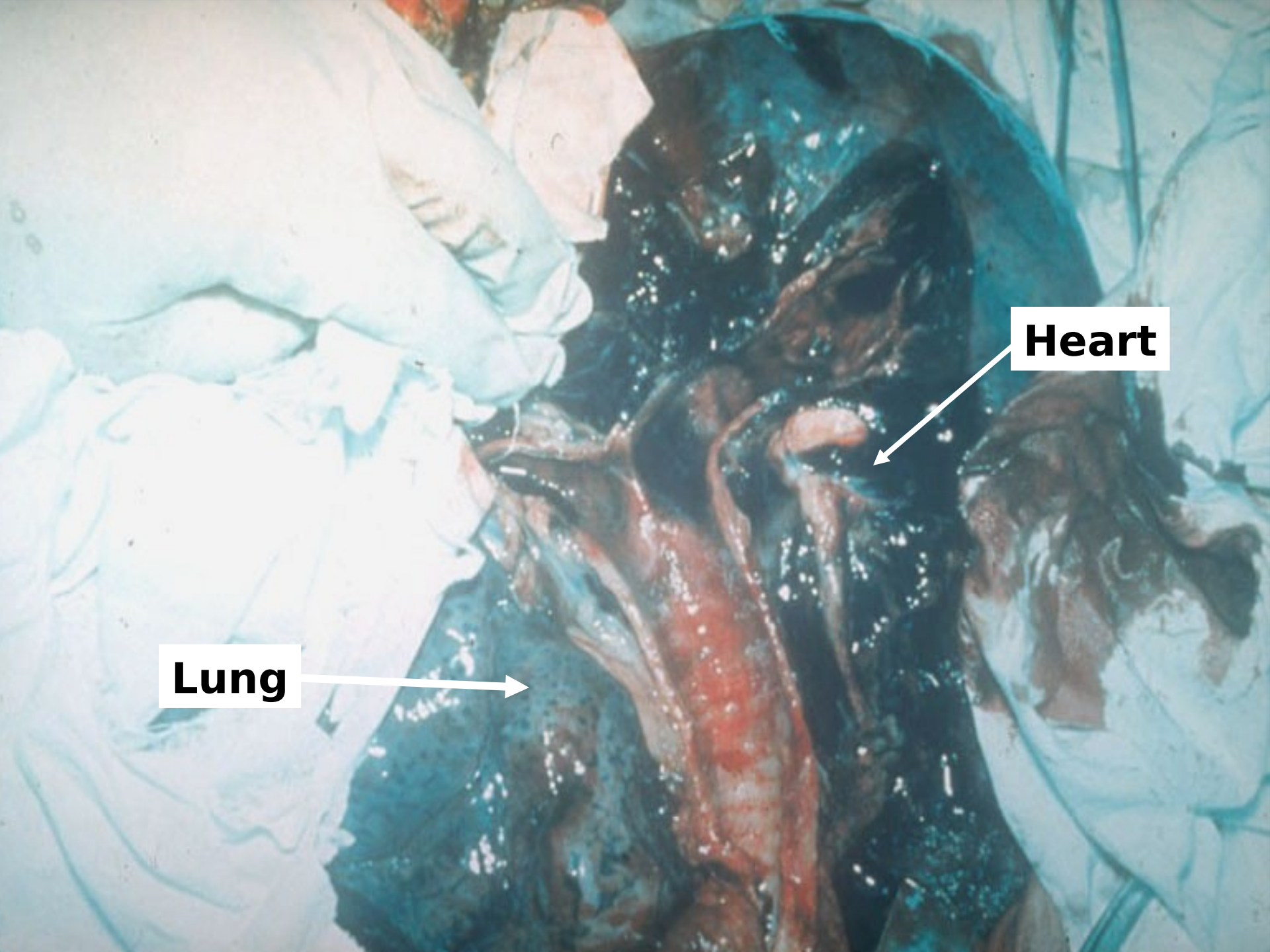
Three modes of transmission

- ◆ **Cutaneous:** through contact with infected animal hides or products
- ◆ **Gastrointestinal:** by ingesting poorly or under-cooked infected meat



Three modes of transmission

- ◆ **Cutaneous:** through contact with infected animal hides or products
 - ◆ **Gastrointestinal:** by ingesting poorly or under-cooked infected meat
 - ◆ **Inhalational:** by inhaling anthrax spores
- 



Heart

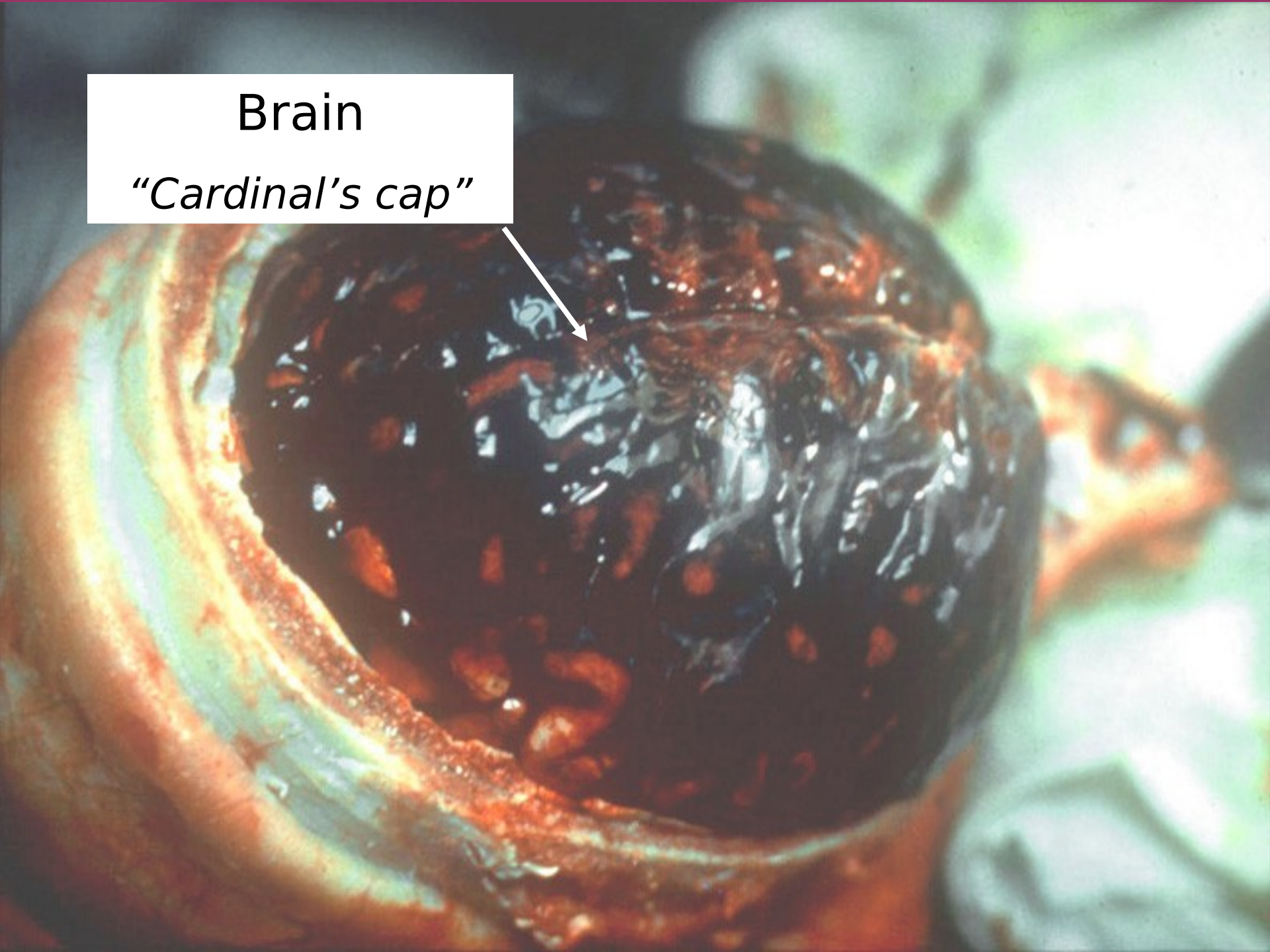
Lung

Pathogenesis

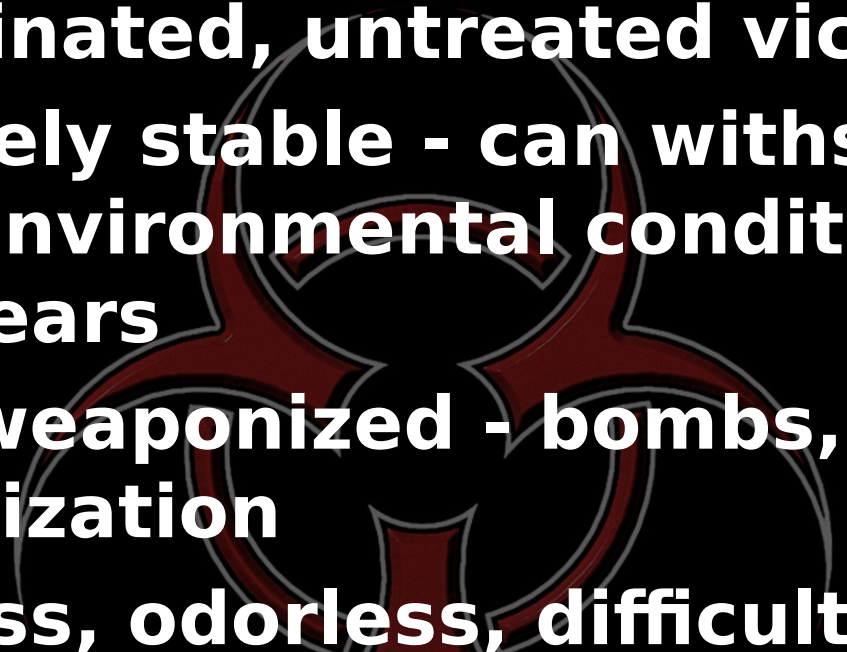
- ◆ **Spores enter lungs, are ingested by macrophages, migrate to lymph nodes**
- ◆ **Spores germinate, multiply and produce toxins, incubation 1-6 days**
- ◆ **Toxins cause destruction of pulmonary and thoracic tissues, resulting in multiple organ failure, pneumonia, meningitis and *death* 24-36 hours from symptom onset**

Brain

"Cardinal's cap"



The Biological Weapon

- ◆ **Highly lethal - 99% in the unprotected, unvaccinated, untreated victim**
 - ◆ **Extremely stable - can withstand harsh environmental conditions for up to 50 years**
 - ◆ **Easily weaponized - bombs, missiles, aerosolization**
 - ◆ **Colorless, odorless, difficult to detect**
- 

Weaponization

- ◆ **Iraq has admitted to weaponizing anthrax**
 - **(10) Al Husayan Missiles,**
 - **(50) R-400 Bombs**
 - **(3) MiG-21 Aircraft with spray tanks**



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 - (10) Al Husayan Missiles,
 - (50) R-400 Bombs
 - (3) MiG-21 Aircraft with spray tanks
- ◆ **Former Soviet scientists stated they had weaponized Anthrax as well**
 - **Missiles, cluster bombs, spray tanks**

Weaponization

- ◆ **Unmanned Aerial Vehicles (UAV)**
- ◆ **Remotely Piloted Vehicles (RPV)**



Ababil unmanned air vehicle (UAV): 1 March 2000 Iran Aircraft Manufacturing Industries has announced that two new variants of the Ababil have fully completed their trials and will enter service shortly. (2000 Jane's Information Group)

James Woolsey

Director CIA 1993-9

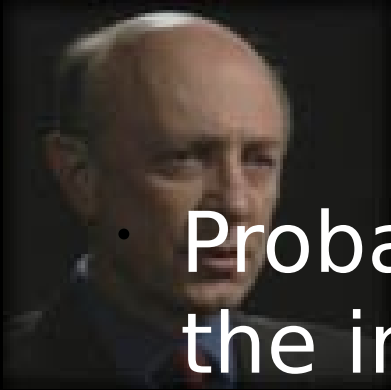


**Which biological attack agent
scares you most of all?**



James Woolsey

Director CIA 1993-9



• Probably anthrax because a lot of the information about it is out there and public. As I said, you don't have to smuggle a thing, you don't have to get anything from a laboratory. It's extremely lethal. It's been around a long time and a lot of people know a good deal about it

Weapons Capability

- ◆ **At least 10 adversarial nations**
 - suspected of researching, developing, and/ or weaponizing anthrax
- ◆ **Terrorist Groups**
 - **Aum Shinrikyo**



Shoko Asahara

Weapons Capability

- ◆ **At least 7 adversarial nations**
 - suspected of researching, developing, and/ or weaponizing anthrax
- ◆ **Terrorist Groups**
 - Aum Shinrikyo
 - **Islamic Extremists**



Osama bin Laden

William S. Cohen

US Secretary of Defense

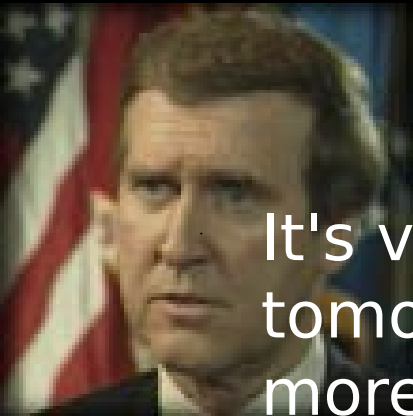


**How real is the threat from
biological warfare both in
terms of terrorism and rogue
states?**

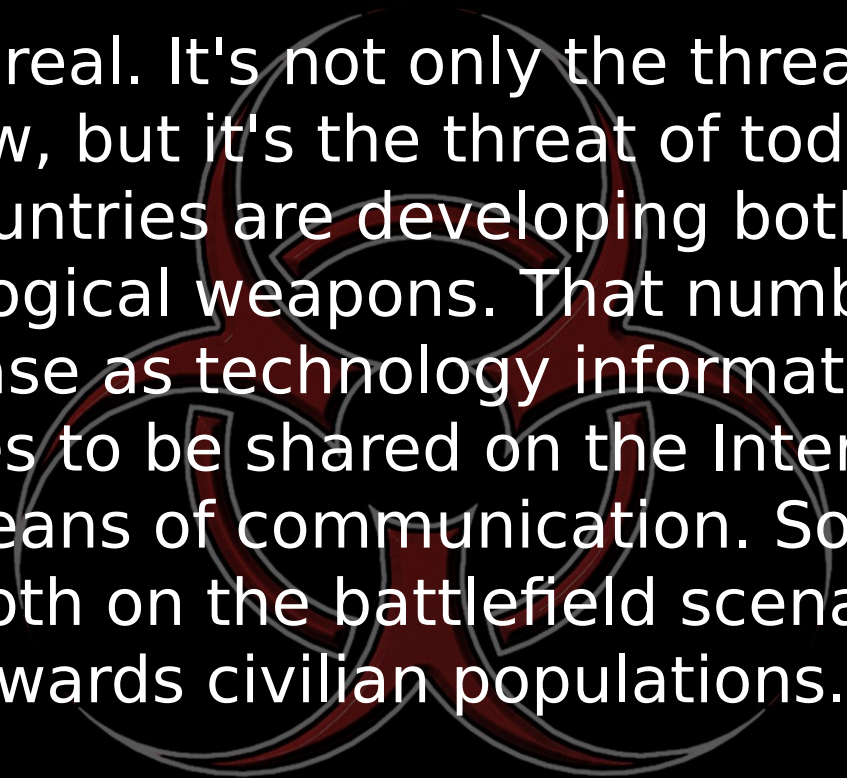


William S. Cohen

US Secretary of Defense



It's very real. It's not only the threat of tomorrow, but it's the threat of today. More and more countries are developing both chemical and biological weapons. That number is bound to increase as technology information continues to be shared on the Internet and other means of communication. So, the threat is real both on the battlefield scenario and also direct towards civilian populations.



James Baker

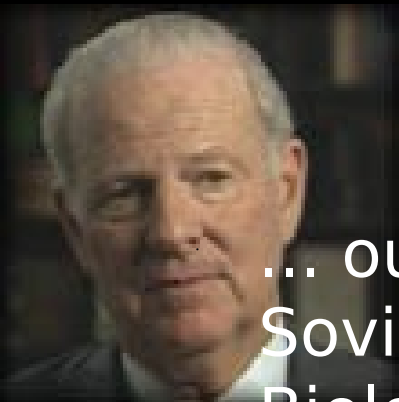
US Secretary of State 1981-1982



What were the first signs that you remember, that there was possibility that the Soviet Union was cheating on the 1972 Biological Weapons Convention?

James Baker

US Secretary of State 1981-1982



... our people were of the view that the Soviets were indeed cheating on the Biological Weapons Convention, that they had facilities in which they were making offensive biological weapons or developing an offensive biological weapons capability. They wanted us to raise this in high-level political meetings with Soviets. And we began to do so.

Dr. Kanatjan Alibekov

First Deputy Director, Biopreparat 198



**During the process of
production in the Soviet
Union's program, how many
tons of biological warfare
agents were storehoused?**

Dr. Kanatjan Alibekov

First Deputy Director, Biopreparat 198



...[the] Kirov facility was responsible for storing Plague, about 20 tons of Plague. The Zagorsk facility (now it's Sergiev Posad) was responsible for storing smallpox biological weapons, about 20 tons as well. And the Ekaterinburg facility (at that time Sverdlovsk) was responsible for continuous manufacturing [of] anthrax biological weapons. The amount of this weapon produced was hundreds of tons.

Soviet Bio-Weapons

- ◆ **Zagorsk**
- ◆ **Pokrov**
- ◆ **Strizhi**
- ◆ **Kirov**
- ◆ **Omutninsk**
- ◆ **Sverdlovsk**
- ◆ **Stepnogorsk**
- ◆ **Berdsk**



0 500 1000 km
0 500 1000 mi



Arctic Ocean

Barents Sea

NORWAY

SWEDEN

ESTONIA

LATVIA

FINLAND

LITH.

LARUS

L

LINE

MOSCOW

Zagorsk

Pokrov

Kirov

Strizhi

Omutninsk

Sverdloysk

Berdsk

Stepnogorsk

GEORGIA • Astrakhan'

Caspian Sea

KAZAKHSTAN

Ural Mts.

Ob'

Irtysk

Ob'

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Lake Baikal

Post Cold War Threat?

- ◆ **With the break up of the Soviet Union, a crumbling Soviet economy and thousands of scientists and bioweaponers out of work...**
- ◆ **These are prime candidates for Rogue nations and extremists to gain the skills they need**



Post Cold War Threat?

- ◆ **Even with Soviet destruction of stockpiles, there is not 100% accountability**
- ◆ **Disposal sites still show signs of contamination and viable anthrax spores**



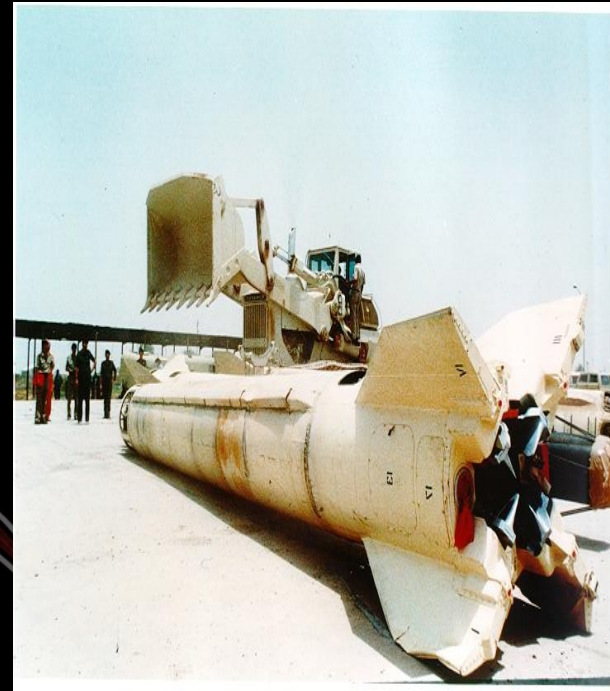
Post Cold War Threat?

- ◆ **Iraq claims they destroyed all of its biological agents from 1991.**
Unverified

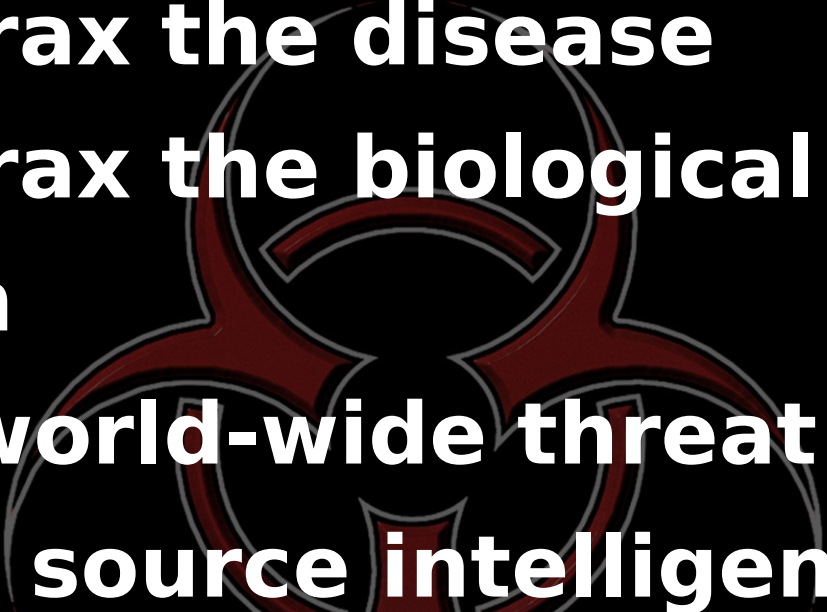


Post Cold War Threat?

- ◆ **Iraq claims they destroyed all of its biological agents from 1991. *Unverified***
- ◆ **Iraq claims they destroyed Al Hussein scuds filled with biological weapons. *Unverified***
- ◆ ***Showed willingness to use biological weapons***



Summary

- ◆ **Anthrax the disease**
 - ◆ **Anthrax the biological weapon**
 - ◆ **The world-wide threat**
 - ◆ **Open source intelligence**
- 

Read more about it ...

